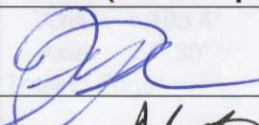
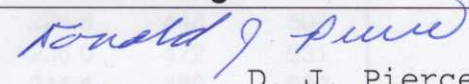

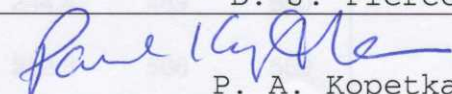
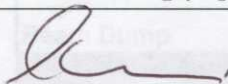


<b>Information-Request/Submittal/Release</b>		<b>Number</b>	<b>S</b>	<b>038-0017</b>		
<b>Number of attached pages</b>		<b>1</b>		<b>New</b> <input type="checkbox"/>		
<b>Project</b>	MACS		<b>Revision</b> <input checked="" type="checkbox"/>			
<b>Originator</b>	T. D. Pike		<b>If revision, provide the following:</b>			
<b>Date</b>	May 18, 2004		<b>Previous Submittal</b>	<b>Rev. 5</b>		
<b>Database Reference</b>	N/A		<b>ECR/ECN</b>			
<b>Scope</b>						
Specification for the Beam Line Reference Positions						
<b>Purpose</b>						
Updates to the Beam Line Spec. In accordance with Cryo Filter Exchanger (CFX) Spec. Development.						
(Document file: Beam Line Spec. 6 .doc)						
<b>Description</b>						
Text changes to the Beam Line Spec following the Development of the CFX Spec. Changes affect only components inside the CFX. Changes noted in Blue.						
<b>Filing</b>		<b>Change Process</b>				
When filed as a submittal, this form and the information attached to it transforms into a released document when it is signed by all parties named in it. The form with attachments is kept on file in the office of the NIST chief engineer. When attachments are electronic in nature (such as electronic CAD data) that information and its hierarchical position in the project design tree shall be identified in or under this submittal. Information Requests, Submittals and Releases are numbered separately, yet sequentially.		Anyone can propose a change to documentation that is released under this form. To such end an Engineering Change Request (ECR) is filed. A priori, the change board is composed of the individuals that signed the submittal against which the ECR is drawn. Approval of the ECR turns it into an Engineering Change Notice (ECN), which gives authority to prepare a new submittal. The new submittal covers at least the fully executed ECN. Approval of the new submittal signifies close-out (full implementation) of the ECN.				
<b>Endorsements (list composition is part of release and determines Change Board for ECR/N's)</b>						
1		<b>Submitted</b>	<b>Reviewed</b>	1		<b>S</b> <b>038-001617</b>
2				2		
3				3		
4				4		
5				5		

Element	$\Delta X$	$\Delta X_i$	$\Sigma \Delta X_i$	x	y	2y	2Y
					Radius	Diameter	Clearance
<b>Theoretical Beam Convergence Point</b>				<b>-1600</b>	0		Diameter
Cold Source Face				0	44.7	89	101
Beam Hole 184 ref				1654	90.9	182	205
Face of Bio Shield @ 781				2435	112.7	225	254
Forward Edge of Bio Shield				2600	117.3	235	264
<b>Shutter In</b>				<b>2650</b>	118.7	237	267
Anti-Streaming Dome (In)		50		<b>2700</b>	120.1	240	270
Anti-Streaming Dome (Out)		50		<b>3400</b>	139.7	279	314
<b>Shutter Out</b>		700	800	<b>3450</b>	141.1	282	317
<b>Cryo Filter Exchanger</b>		CFX	450	<b>3475</b>	141.8	284	319
Sapphire	43	150		<b>3510</b>	142.7	285.9	322
	7			3660	146.9	294.3	
Beryllium		100		<b>3675</b>	147.3	294.7	332
	7			3775	150.1	300.3	
Pyrolytic Graphite		100		<b>3790</b>	150.6	300.7	338
	43			3890	153.3	306.3	
				<b>3925</b>	154.3	309	347
<b>Choke</b>	10						
Entrance	120			<b>3935</b>	154.6	309.2	348
Exit				<b>4055</b>	158.0	315.9	355
	39						
<b>Cask In</b>				<b>4094</b>	159.0	318.1	358
	56						
<b>In-line Collimator Exchanger</b>		ICX	355	<b>4150</b>	160.6	321	361
		140		<b>4290</b>	164.5	329	370
	5			<b>4295</b>	164.7	329	371
		210		<b>4505</b>	170.5	341	384
	45						
<b>Variable Beam Aperture</b>		VBA	205	<b>4550</b>	171.8	344	387
		100		<b>4650</b>	174.6	349	393
	5			<b>4655</b>	174.7	349	393
		100		<b>4755</b>	177.5	355	399
<b>Monochromator</b>		DFM					
Leading Edge	38			<b>4793</b>	178.6	357	402
Axis 35°	300			<b>5093</b>	187.0	374	421
Axis 90°		Total Travel		<b>6200</b>	217.9	436	490
Axis 105.4°		1757		<b>6413.5</b>	223.8	448	504
Axis 130°				<b>6850</b>	236.0	472	531
Trailing Edge				<b>7150</b>	244.4	489	550
	300						
<b>Cask Out</b>	2150		3356	<b>7450</b>	252.8	506	569
<b>Beam Dump</b>				<b>9600</b>	312.8	626	704

Table 1 1.600-Degree Divergence Beam Equation

Rev. 6